The Role of the Dietitian in the Built Environment

Developed by:

The Public Health Nutritionists of Saskatchewan

The built environment can be planned so healthy choices are the default choices. Dietitians who address the built environment go beyond the traditional approach of nutrition education and act on external factors that influence the food choices people make each day. The built environment can support healthy eating and nutrition through access to healthy food choices.

September 2015
Introduction

The built environment refers to the human-made surroundings that provide the setting for all human activity, which include those places where people live, work, eat, learn, rest and play. These spaces range from rural streets to bustling downtowns and all the places in between.\(^1\) The built environment can be planned to enhance an individual’s and a community’s health by creating places where the default choice is the healthiest option.

A Healthy Built Environment Features: \(^2-5\)

- **A food system** that ensures safe, affordable, and equal access to healthy food, protects and restores the environment, and supports the local economy;
- Transportation networks that are safe, accessible, and prioritize active transportation, such as walking or biking, to destinations for basic amenities such as healthy food, schools, parks and recreation;
- Neighbourhood designs where people can easily access day to day services and which foster opportunities for social interaction;
- Housing that is affordable, accessible and free of environmental and physical hazards; and
- Natural environments which are protected, connected and accessible for all to enjoy.

Healthy Food Systems

There is an important role for dietitians to work towards healthy food systems. The food system determines what food is accessible and how it is chosen. A healthy food system within the built environment includes the following three concepts: \(^2\)

1) **Food Environments** - access to healthy food in all neighbourhoods;

2) **Community Food Infrastructure** - a system of food facilities, programs, and social networks such as community kitchens or gardens that aim to improve a person’s quality of life; and

3) **Sustainable Agriculture** - “… the efficient production of safe, high quality agricultural products, in a way that protects and improves the natural environment, the social and economic conditions of farmers, their employees and local communities, and safeguards the health and welfare of all farmed species.” \(^6\)

---

\(^{1}\) Source: \(\text{http://www.wk.gov.com/wkgreen/food}\)
A healthy food system considers how food is grown, harvested, processed, distributed, marketed, consumed and disposed of (Figure 1). The economic, ecological and social value of food extends beyond its nutritional value. This concept is encompassed in the area of civic dietetics, which is the promotion of a sustainable, just, economically viable, community based food system.7

As advocates and educators, dietitians have both a role and responsibility in promoting healthy food systems. Promoting and supporting a healthy food system goes beyond providing education to improve eating habits but also considers the impact of food choices, programs and policies on the food system. A healthy food system will ultimately improve the built environment and community health.

Evidence Summary

1) Food Environments

The food environment can be defined as the food and beverage choices that are accessible to people while they are in the places they live, work, eat, learn, and play. The product placement, pricing, marketing and advertising of food and beverages all have a direct impact on food choices made in the environment.8 Food environments can make healthy choices easy or difficult.

Most of the evidence in food environment research focuses on geographic food access (Figure 2) and its link to diet and chronic disease and neighbourhood socio-economic status. Positive preliminary findings demonstrate that:

- The most promising evidence for food environment intervention supports the increase of accessibility to healthy food within small food retail stores.8,10
- Evidence does not support an increased number of grocery stores to improve dietary outcomes or food security.10-12
- There appears to be a link with increased Body Mass Index (BMI) and obesity with poor access to healthy food and easy access to corner stores or fast food outlets. This is especially evident in children when fast food restaurants are near schools.13,14

Figure 2: Geographical Food Access to a Supermarket in the City of Regina

Source: Environmental Scan Conventional and Indigenous Food System and Gaps in Regina Area SK, http://foodregina.ca/
People most affected by the food environments within their neighbourhoods are those without access to a vehicle or public transportation. Even with access to public transportation there are added challenges for a person to make the healthy choice; some challenges may include extra time to walk to and from pick up and drop off points, extra time waiting for public transportation to arrive and depart, carrying the weight of groceries to and from pick up and drop off points, and the added cost of taking public transportation if they are not within walking distance. If access to healthy food is not within walking distance, a person without access to a vehicle or public transportation may have to pay for a more costly form of transportation such as a taxi service to take them to and from the grocery store.

Low income neighbourhoods tend to have better access to corner stores and fast food outlets than stores that sell healthier food options. These neighbourhoods are sometimes called food swamps. Research suggests that food swamps may have a greater impact on health than food deserts where little or no healthy food is available.

**Research Limitations**

Food environments are an area of continued and growing research. Most food environment research has been completed in the United States or United Kingdom and in an urban setting. Very little research has been completed on food environments in rural and northern settings. Further, inconsistent methodologies make it difficult to compare a study completed in one city with a study completed elsewhere in Canada.

The Canadian literature on food environments is hampered by weak methodologies, resulting in some studies noting a decreased association between food environments and health outcomes. There is a stronger association between food environments and health outcomes in studies with well-designed methodologies.

**Dietitians can help improve food environments:**

- Collaborate with municipalities, developers, food producers or businesses to ensure that healthy food is available within schools, recreation facilities, public spaces and communities. Work to limit the presence of fast food outlets, especially near schools;
- Identify or create spaces to grow food in both rural and urban settings;
- Work with developers, city officials, and rural municipalities to encourage healthy food retail within short distances of where people live;
- Complete a food environment assessment. The results can support the adoption of programs or policies that increase community access to healthy food and decrease access to less healthy food.
2) Community Food Infrastructure

There is strong evidence that indicates access to community food infrastructure such as community kitchens or gardens, improves social skills, social supports, health behaviours and coping skills. However, there is only moderate evidence that indicates food skill and diet quality improves with access to community food infrastructure. There is no conclusive evidence indicating individual food security is improved through access to community gardens and kitchens.

Dietitians can help improve community food infrastructure:

- Identify existing space available for community kitchens or gardening programming. Seek out partnerships for permission to use and implement programming in the space;
- Advocate for spaces in new buildings to support community food infrastructure such as greenhouses, food storage areas such as root cellars and freezers, commercial kitchens and outdoor water supplies for gardens;
- Build capacity in organizations to deliver programs that incorporate food skills such as the ability to grow, harvest, cook, preserve and compost food. For example, support school based educators to incorporate food skills into the current curricula and assist school and community programs to offer gardening, composting and cooking activities;
- Encourage communities to create environments where mothers feel comfortable and welcome to breastfeed and support organizations in becoming Baby Friendly: [http://breastfeedingcanada.ca/BFI.aspx](http://breastfeedingcanada.ca/BFI.aspx);
- Complete a community food assessment to help map community food infrastructures and resources in your community. Refer to the following resources to get started:
  - [www.sfu.ca/content/dam/sfu/cscd/PDFs/researchprojects_food_security_communityfoodassessmentguideforbc.pdf](http://www.sfu.ca/content/dam/sfu/cscd/PDFs/researchprojects_food_security_communityfoodassessmentguideforbc.pdf)
3) Sustainable Agriculture

There is a lack of research on the effects of sustainable agriculture on health outcomes. This area is recommended for future research. Expert opinions agree that:

- Agricultural land, workforce capacity, and supportive infrastructure such as packing, processing, storage and distribution systems are essential for a healthy food system at a local and regional level.

- Small scale urban agricultural activities such as backyard or community gardens and edible landscapes (i.e. fruit trees on public property) have the potential to build a sense of community, influence food knowledge and preferences, and contribute to the local food supply.

- Local food systems, including urban agriculture, can reduce environmental impacts and increase the resilience of food systems by reducing dependence on oil. Urban agriculture can make use of city storm water, wastewater and food waste, and increase biodiversity in cities.

*Dietitians can help improve sustainable agriculture:*  
- Advocate for control of urban and “town” sprawl to protect availability of agricultural land by working with town councils and rural municipalities to develop policies for land use and planning;  
- Collaborate with partners to create healthy public policies that integrate sustainability, economic goals and public health. For example partner with tribal councils to establish productive lands that support indigenous food systems;  
- Advocate, create and support policies between local producers and food service departments, schools or other community initiatives, to ensure public availability of local food;  
- Create public awareness about sustainable agriculture. Broaden the message of healthy eating to include a food systems perspective and educate others about eating in a way that is healthy and sustainable in counseling, presentations and in general conversation.
Where to Start

1) Be Informed

Learn more about the built environment and food systems and make it a continuing education goal. Read the Key Resources listed on page 11 in this paper. Check out universities and colleges for local or distance courses on food systems. Learn about national and local food policies that affect the availability of healthy food in your community(s).

Optional Questions to Get Started

- Reflect on the nature of your current work in relation to the evidence summarized in this role paper and Key Resources. How does it relate? How is it unrelated?
- What are the individual challenges to working with the built environment and food systems? What skills or supports do you need? How can you attain those skills or supports?
- What are the organizational challenges to working with the built environment and food systems? How can you overcome those challenges?

2) Build Partnerships with Key Players

Connect with others. Working in isolation will not improve the built environment or food systems. Most success is seen when diverse, non-traditional partnerships and collaborations are formed with various sectors of society, including businesses, various levels of government, school board officials, rural municipalities, community associations, universities and community groups.\(^7,20,21\)

- Identify and map the assets within your community and explore how you can work together on shared goals.
- Form, or participate on, a policy council or coalition.
- Get involved in city and community planning.
- Participate in national, provincial and local food and nutrition boards.
- Identify community development and food advocacy organizations in your community. Align the food issues you hope to address with their mission(s) and identify how you can work together.
- Connect with researchers or public health experts to ensure that food policies are grounded in independent scientific and evidence based knowledge.
- Talk with local universities or colleges to complete research and learn about other research projects. Encourage evaluation of local initiatives that support healthy food systems.
3) Determine Where Partnerships Can Make an Impact

There are a number of ways to make a positive impact on the built environment and food systems. Determining the best use of resources and time to implement action is based on a number of factors including readiness for change, political climate, economic environment, community needs and interests and the resources and interests of the partnership. Share evidence based knowledge to help guide the partnership’s actions.

Optional Questions to Get Started

- What key messages did the partnership take away from the evidence summarized in this role paper and/or Key Resources? How can the evidence guide or support the partnership’s action plan?
- How can the partnership support a process to strengthen existing policies so they are evidence based for the health of the population?
- If no policy exists, how can the partnership assist with developing, implementing, and evaluating the effectiveness of a policy that supports a healthy built environment and food system?

- In relation to the built environment and food systems, what assets exist in your community(s)? What gaps exist?
- What organizations or partnerships exist in the community(s) that have a shared vision, mission and goals and/or may benefit from a partnership with a dietitian?
- What policies exist that impact the built environment and food system? How do they relate to the evidence summarized in this role paper and Key Resources? When was it last reviewed? Who are the key stakeholders to engage to review this existing policy?
- If no policy exists, who are the key stakeholders to engage to identify if there is a need for a policy that supports a healthy built environment and food system?
Conclusion

Food systems determine food availability and how food choices are made. Healthy food systems can promote access and availability to healthy food for all while supporting a healthy built environment.

Dietitians have a role in helping all people have access to a healthy food system. Addressing the built environment pushes beyond a traditional approach to healthy eating and nutrition. It considers a more holistic approach to food and healthy eating that acknowledges external factors that influence the food that we eat. Studies have shown that inactive lifestyles, accessibility to healthy food, food infrastructure, and land use influence population health and well-being.

It is not sufficient to tell individuals to choose healthy foods; it is necessary to create and support healthy environments that enable these healthy food choices. The knowledge and skills of dietitians are valued and necessary as part of the movement towards creating a healthy food system and a healthy built environment for generations to come.

The Public Health Nutritionists of Saskatchewan would like to thank the following key contributors and reviewers for their efforts in developing this paper:

Key Contributors

Kaylee Michnik, Public Health Nutritionist, Regina Qu’Appelle Health Region
Tracy Sanden, Public Health Nutritionist, Regina Qu’Appelle Health Region
Melanie Warken, Public Health Nutritionist, Five Hills Health Region
Stacey Wiens, Public Health Nutritionist, Prairie North Health Region
Cassandra Touet, Public Health Nutritionist, Prairie North Health Region
Cathryn Abrametz, Public Health Nutritionist, Prince Albert Parkland Health Region

Key Reviewers

Leia M. Minaker, PhD, Scientist, Propel Centre for Population Health Impact
Rachel Engler-Stringer, PhD, Associate Professor, Department of Community Health and Epidemiology, College of Medicine, University of Saskatchewan
Naomi Shanks, Public Health Nutrition Consultant, Ministry of Health
Glossary

**Built Environment** – the human-made surroundings that provide the setting for all human activity, which include those places where people live, work, eat, learn, rest and play. These spaces range from rural streets to bustling downtowns and all the places in between. ¹

**Civic Dietetics** – an area of dietetics involving the promotion of a sustainable, just, economically viable, community based food system.⁷

**Community Food Infrastructure** – a system of food facilities, programs, and social networks, such as community kitchens or gardens, that aim to improve a person’s quality of life.

**Food Desert** – a geographic area, such as a community, where there is a lack of access to affordable, nutritious food. This is largely due to a lack of grocery stores, farmers’ markets, and healthy food providers.³⁰

**Food Environment** – the food and beverage choices that are accessible to people while they are in the places they live, work, eat, learn, and play. The product placement, pricing, marketing and advertising of food and beverages all have a direct impact on food choices made in the environment.⁸

**Food Swamp** – a geographic area, such as a community, that has better access to corner stores and fast food outlets versus stores that sell healthier food options, such as a grocery store or farmer’s market.³¹

**Food Systems** – all the processes in feeding a population; how food is grown, harvested, processed, distributed, marketed, consumed and disposed of.

**Sustainable Agriculture** – the efficient production of safe, high quality agricultural products, in a way that protects and improves the natural environment, the social and economic conditions of farmers, their employees and local communities, and safeguards the health and welfare of all farmed species.⁶

**Urban Agriculture** – practice of growing, processing, and distributing food in a village, town, or city.
Key Resources


References


